PROGRAMMING - I (CS101)

L-T-P (2-0-0) Credit: 02

UNIT I: Introduction to Computer**: -** Definition, Characteristic, Generation of Computers, Basic Components of a Computer System , Memory, Input ,Output and Storage units, Hard Copy Devices, High level language and Low level language, Software, System Software, Application software, Hardware, Firmware, Compiler, Interpreter and Assembler.

UNIT II: Introduction to Programming Concept: Introduction to algorithm and Flow chart; Representation of algorithm using Flow chart symbols .Pseudo code. Basic algorithm design, characteristics of good algorithm .Development of Algorithm.

UNIT III: Introduction to C **p**rogramming language: , Declaring Variables ,Preprocessor Statements ,Arithmetic Operators , Programming Style , Keyboard Input , Relational Operators , Introduction, feature of C language, concepts, uses, Basic program structure, Simple data types, variables, constants, operators, comments, Control flow statement : If ,while, for, do-while, switch .

UNIT IV: User Defined Data Types, arrays, declaration and operations on arrays. Structure, Member accessing, Structure and Union, Array of Structures, Functions, declaration and use of functions, parameter passing, Dynamic Memory Allocation .

UNIT V: Fundamentals of pointers : Declaration and usages of pointers, operations that can be performed on computers, use of pointers in programming exercises, parameter passing in pointers ,Call by value, call by references.

UNIK VI: Introduction to LINUX: LINUX structure, Directory, LINUX commands.

Text Book:

1. C Programming by Herbert Shield

2. ANSI C by Balaguruswami

References:

1. ”C” programming by Dennis Ritchie

2. The C Puzzle Book by Alan R. Feuer

3. Expert C Programming by Peter van der Linden

4. Introduction to UNIX: Sumitabaha Das

5. C: A Reference Manual (5th Edition) by Samuel P. Harbison &Samuel P. Harbison (Author)

6. Programming Using the C Language by Hutchison,R.C, Mcgraw Hill Book Company, New York